

**THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of	
Inventors: Jose German Rivera et al.	: Confirmation No. 2936
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U.S. Patent Application No. 10/786,843	: Group Art Unit: 2192
	:
Filed: February 25, 2004	: Examiner: Zheng WEI
For: METHOD AND APPARATUS FOR MONITORING COMPUTER SOFTWARE	

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Attn: BOARD OF PATENT APPEALS AND INTERFERENCES

**SUPPLEMENTAL BRIEF ON APPEAL**

This amended brief is in furtherance of the Notice of Non-Compliant brief mailed

December 17, 2008.

The Appeal Brief fees required under § 1.17(f) were paid on November 25, 2008.

**V. Summary of Claimed Subject Matter**

The present invention relates generally to a method for monitoring computer software.

**Claim 1**

Independent claim 1 recites a method for monitoring computer software comprising:

receiving an assertion from an executing process, wherein the executing process is integral to an operating system and wherein receiving an assertion comprises: (See Instant specification in at least paragraphs 10, 12-15, 23-24, 40-43 and FIG. 1, element 5, FIG. 2, element 35, FIG. 8, elements 130, 135, FIG. 9, elements 130, 270, FIG. 12, element 525, FIG. 13, elements 620, 525)

receiving an assertion request; (See Instant specification in at least paragraphs 10, 12-15, 23-24, 40-43 and FIG. 1, element 5, FIG. 2, element 35, FIG. 8, element 130, 135, FIG. 9, elements 130, 270, FIG. 12, element 525, FIG. 13, elements 620, 525)

performing at least one of:

recognizing an assertion request type corresponding to the assertion request; or (See Instant specification in at least paragraphs 13, 15, 16, 23, 25, 28, 41, 43, and FIG. 2, element 40, FIG. 8, elements 135, 150, FIG. 9, elements 270, 285, FIG. 10, element 370, FIG. 12, element 525, FIG. 13, element 530)

determining a component that sourced the assertion request; and (See Instant specification in at least paragraphs 14, 15, 16, 24,

26, 28, 42, 43, and FIG. 2, element 75, FIG. 8, elements 135, 150, FIG. 9, element 285, FIG. 12, element 525, FIG. 13, elements 525, 530)

accepting the assertion request for at least one of:

an assertion request of an enabled recognized assertion request type; or (See Instant specification in at least paragraphs 13, 14, 15, 16, 24, 25, 28, 41, 43, and FIG. 2, elements 45, 50, FIG. 3, FIG. 8, elements 135, 150, FIG. 9, elements 285, 315, FIG. 13, element 530)

an assertion request of a determined component which has assertion requests enabled; (See Instant specification in at least paragraphs 13, 14, 15, 16, 26, 27, 28, 42, 43, and FIG. 2, elements 70, 50, FIG. 3, FIG. 8, elements 135, 150, FIG. 9, elements 285, 315, FIG. 13, element 530)

recording the assertion when the assertion is violated; and (See Instant specification in at least paragraphs 10, 12, 13, 14, 17, 18, 23, 29, 30, 31, 37, 40, 41, 42, 43, 44, 45, 46, and FIG. 1, element 10, FIG. 4, element 90, FIG. 5, elements 95, 100, FIG. 8, element 150, FIG. 12, element 530, FIG. 13, element 530, FIG. 14, element 530)

allowing the executing process to continue execution (See Instant specification in at least paragraphs 10, 12, 13, 14, 40, 41, 42, 43, 45, and FIG. 1, element 15).

**Claim 6**

Dependent claim 6 recites the method of claim 1 wherein recording the assertion comprises writing information regarding the assertion violation to a circular buffer (See Instant specification in at least paragraph 19 and FIG. 5, element 100, FIG. 10, element 400, FIG. 14, element 517).

**Claim 11**

Independent claim 11 recites an apparatus for monitoring computer software comprising:

a memory comprising (See Instant specification in at least paragraphs 36-39, and FIG. 12, element 505):

an assertion receiver arranged to receive an assertion from an executing process, wherein the executing process is integral to an operating system and wherein the assertion receiver comprises (See Instant specification in at least paragraph 37 and FIG. 12, element 525):

an assertion request receiver arranged to receive an assertion request; and (See Instant specification in at least paragraphs 10, 12-15, 23-24, 40-43, and FIG. 9, element 270)

an assertion accept determination unit arranged to recognize an assertion type and generate an accept assertion signal for at least one of (See Instant specification in at least paragraphs 24-28, and FIG. 9, element 285):

an enabled recognized assertion type; or (See Instant specification in at least paragraph 24-28, and FIG. 9, element 320)

an enabled determined component; and (See Instant specification in at least paragraph 28, and FIG. 9, element 330)

an assertion recorder arranged to record the assertion when the assertion is violated (See Instant specification in at least paragraph 37, 40-46, and FIG. 10, and FIG. 12, element 530, FIG. 13, element 530, FIG. 14, element 530).

#### Claim 16

Dependent claim 16 recites the apparatus of claim 11 wherein the assertion recorder comprises:

an information interface arranged to receive assertion violation data; and (See Instant specification in at least paragraph 29-31, and FIG. 10, element 370)

a buffer manager arranged to convey the assertion violation data to a circular buffer (See Instant specification in at least paragraph 19 and FIG. 5, element 100, FIG. 10, elements, 380, 400, 405, FIG. 14, element 517).

#### Claim 21

Independent claim 21 recites a computer software monitoring system comprising:

memory capable of storing instructions (See Instant specification in at least paragraphs 36-39, and FIG. 12, element 505);

processor capable of executing instructions stored in the memory (See Instant specification in at least paragraphs 36 and 38-39, and FIG. 12, element 500); and

software monitor instruction sequence that, when executed by the processor, minimally causes the processor to (See Instant specification in at least paragraphs 36-49, and FIG. 12, element 520):

receive an assertion from an executing process, wherein the executing process is integral to an operating system and wherein the software monitor instruction sequence comprises an assertion receiver instruction sequence that, when executed by the processor, minimally causes the processor to receive an assertion by minimally causing the processor to (See Instant specification in at least paragraphs 10, 12-15, 23-24, 40-43 and FIG. 1, element 5, FIG. 2, element 35, FIG. 8, elements 130, 135, FIG. 9, elements 130, 270, FIG. 12, element 525, FIG. 13, elements 620, 525):

receive an assertion request (See Instant specification in at least paragraphs 10, 12-15, 23-24, 40-43 and FIG. 1, element 5, FIG. 2, element 35, FIG. 8, element 130, 135, FIG. 9, elements 130, 270, FIG. 12, element 525, FIG. 13, elements 620, 525);

perform at least one of:

recognize a type for the assertion request; or (See Instant specification in at least paragraphs 13, 15, 16, 23, 25, 28, 41, 43, and FIG. 2, element 40, FIG. 8, elements 135, 150, FIG. 9, elements 270, 285, FIG. 10, element 370, FIG. 12, element 525, FIG. 13, element 530)

determine a component that sourced the assertion request; and

accept the assertion request for at least one of: (See Instant specification in at least paragraphs 14, 15, 16, 24, 26, 28, 42, 43, and FIG. 2, element

75, FIG. 8, elements 135, 150, FIG. 9, element 285, FIG. 12, element 525, FIG. 13, elements 525, 530)

an enabled recognized assertion request type; or (See Instant specification in at least paragraphs 13, 14, 15, 16, 24, 25, 28, 41, 43, and FIG. 2, elements 45, 50, FIG. 3, FIG. 8, elements 135, 150, FIG. 9, elements 285, 315, FIG. 13, element 530)

an enabled determined component, (See Instant specification in at least paragraphs 13, 14, 15, 16, 26, 27, 28, 42, 43, and FIG. 2, elements 70, 50, FIG. 3, FIG. 8, elements 135, 150, FIG. 9, elements 285, 315, FIG. 13, element 530)

record the assertion, and (See Instant specification in at least paragraphs 10, 12, 13, 14, 17, 18, 23, 29, 30, 31, 37, 40, 41, 42, 43, 44, 45, 46, and FIG. 1, element 10, FIG. 4, element 90, FIG. 5, elements 95, 100, FIG. 8, element 150, FIG. 12, element 530, FIG. 13, element 530, FIG. 14, element 530)

allow the executing process to continue execution (See Instant specification in at least paragraphs 10, 12, 13, 14, 40, 41, 42, 43, 45, and FIG. 1, element 15).

#### Claim 26

Dependent claim 26 recites the computer software monitoring system of Claim 21 wherein the software monitor instruction sequence comprises an assertion recorder instruction sequence that, when executed by the processor, minimally causes the processor to record an assertion by minimally causing the processor to write information regarding the assertion to a circular buffer (See Instant specification in at

least paragraph 19 and FIG. 5, element 100, FIG. 10, element 400, FIG. 14, element 517).

### Claim 31

Independent claim 31 recites a computer-readable medium having computer-executable instructions for performing a method for monitoring computer software, the instructions comprising modules for:

receiving an assertion from an executing process, wherein the executing process is integral to an operating system and wherein the receiving an assertion module comprises modules for: (See Instant specification in at least paragraphs 10, 12-15, 23-24, 40-43 and FIG. 1, element 5, FIG. 2, element 35, FIG. 8, elements 130, 135, FIG. 9, elements 130, 270, FIG. 12, element 525, FIG. 13, elements 620, 525)

receiving an assertion request; (See Instant specification in at least paragraphs 10, 12-15, 23-24, 40-43 and FIG. 1, element 5, FIG. 2, element 35, FIG. 8, element 130, 135, FIG. 9, elements 130, 270, FIG. 12, element 525, FIG. 13, elements 620, 525)

performing at least one of:

recognizing an assertion request type corresponding to the assertion request; or (See Instant specification in at least paragraphs 13, 15, 16, 23, 25, 28, 41, 43, and FIG. 2, element 40, FIG. 8, elements 135, 150, FIG. 9, elements 270, 285, FIG. 10, element 370, FIG. 12, element 525, FIG. 13, element 530)

determining a component that sourced the assertion request; and (See Instant specification in at least paragraphs 14, 15, 16, 24, 26, 28, 42, 43, and

FIG. 2, element 75, FIG. 8, elements 135, 150, FIG. 9, element 285, FIG. 12, element 525, FIG. 13, elements 525, 530)

accepting the assertion request for at least one of:

an assertion request of an enabled recognized assertion request type; or (See Instant specification in at least paragraphs 13, 14, 15, 16, 24, 25, 28, 41, 43, and FIG. 2, elements 45, 50, FIG. 3, FIG. 8, elements 135, 150, FIG. 9, elements 285, 315, FIG. 13, element 530)

an assertion request of a determined component which has assertion requests enabled; (See Instant specification in at least paragraphs 13, 14, 15, 16, 26, 27, 28, 42, 43, and FIG. 2, elements 70, 50, FIG. 3, FIG. 8, elements 135, 150, FIG. 9, elements 285, 315, FIG. 13, element 530)

recording the assertion; and (See Instant specification in at least paragraphs 10, 12, 13, 14, 17, 18, 23, 29, 30, 31, 37, 40, 41, 42, 43, 44, 45, 46, and FIG. 1, element 10, FIG. 4, element 90, FIG. 5, elements 95, 100, FIG. 8, element 150, FIG. 12, element 530, FIG. 13, element 530, FIG. 14, element 530)

allowing the executing process to continue execution (See Instant specification in at least paragraphs 10, 12, 13, 14, 40, 41, 42, 43, 45, and FIG. 1, element 15).

#### Claim 36

Dependent claim 36 recites the computer-readable medium of claim 31 wherein the recording the assertion module comprises a module for writing information regarding the assertion to a circular buffer (See Instant specification in at least paragraph 19 and FIG. 5, element 100, FIG. 10, element 400, FIG. 14, element 517).

## Claim 41

Independent claim 41 recites an apparatus for monitoring computer software comprising:

means for detecting an assertion from an executing process, wherein the executing process is integral to an operating system and wherein the means for detecting comprises (See Instant specification in at least paragraphs 10, 12-15, 23-24, 40-43 and FIG. 1, element 5, FIG. 2, element 35, FIG. 8, elements 130, 135, FIG. 9, elements 130, 270, FIG. 12, element 525, FIG. 13, elements 620, 525):

means for ascertaining at least one of:

a type of an assertion request; or (See Instant specification in at least paragraphs 13, 15, 16, 23, 25, 28, 41, 43, and FIG. 2, element 40, FIG. 8, elements 135, 150, FIG. 9, elements 270, 285, FIG. 10, element 370, FIG. 12, element 525, FIG. 13, element 530)

a component that sourced an assertion request; and (See Instant specification in at least paragraphs 14, 15, 16, 24, 26, 28, 42, 43, and FIG. 2, element 75, FIG. 8, elements 135, 150, FIG. 9, element 285, FIG. 12, element 525, FIG. 13, elements 525, 530)

means for ignoring the assertion request for at least one of:

a non-enabled ascertained assertion request type; or (See Instant specification in at least paragraphs 13, 14, 15, 16, 24, 25, 28, 41, 43, and FIG. 2, elements 45, 50, FIG. 3, FIG. 8, elements 135, 150, FIG. 9, elements 285, 315, FIG. 13, element 530)

a non-enabled ascertained component; (See Instant specification in at least paragraphs 13, 14, 15, 16, 26, 27, 28, 42, 43, and FIG. 2, elements 70, 50, FIG. 3, FIG. 8, elements 135, 150, FIG. 9, elements 285, 315, FIG. 13, element 530)

means for recording information pertaining to the assertion when it is violated; and (See Instant specification in at least paragraphs 10, 12, 13, 14, 17, 18, 23, 29, 30, 31, 37, 40, 41, 42, 43, 44, 45, 46, and FIG. 1, element 10, FIG. 4, element 90, FIG. 5, elements 95, 100, FIG. 8, element 150, FIG. 12, element 530, FIG. 13, element 530, FIG. 14, element 530)

means for allowing the executing process to continue execution (See Instant specification in at least paragraphs 10, 12, 13, 14, 40, 41, 42, 43, 45, and FIG. 1, element 15).

#### Claim 49

Independent claim 49 recites a method for monitoring computer software comprising:

receiving an assertion from an executing process, wherein the executing process is integral to an operating system; (See Instant specification in at least paragraphs 10, 12-15, 23-24, 40-43 and FIG. 1, element 5, FIG. 2, element 35, FIG. 8, elements 130, 135, FIG. 9, elements 130, 270, FIG. 12, element 525, FIG. 13, elements 620, 525)

recording the assertion when the assertion is violated; and (See Instant specification in at least paragraphs 10, 12, 13, 14, 17, 18, 23, 29, 30, 31, 37, 40, 41, 42, 43, 44, 45, 46, and FIG. 1, element 10, FIG. 4, element 90, FIG. 5, elements 95,

100, FIG. 8, element 150, FIG. 12, element 530, FIG. 13, element 530, FIG. 14, element 530)

allowing the executing process to continue execution (See Instant specification in at least paragraphs 10, 12, 13, 14, 40, 41, 42, 43, 45, and FIG. 1, element 15).